United States of America, State of Indiana
v.
Atlantic Richfield Company and E.I. Du Pont De Nemours and Company
No. 2:14-cv-00312

Memorandum in Opposition to Applicants' Motion to Intervene

Exhibit D

Declaration of Thomas Alcamo

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF INDIANA

UNITED STATES OF AMERICA, STATE OF INDIANA, Plaintiffs, v. ATLANTIC RICHFIELD COMPANY, ET AL., Defendants.	NO. 2:14-CV-00312 JUDGE PHILIP P. SIMON

DECLARATION OF THOMAS ALCAMO

I, Thomas Alcamo, do declare and affirm as follows:

PROFESSIONAL BACKGROUND AND PERSONAL KNOWLEDGE

1. I am employed by the United States Environmental Protection Agency ("EPA"). In 1980, I received a Bachelor of Science degree in Microbiology from Michigan State University. In 1984, I received a Bachelor of Science degree in Chemical Engineering from Wayne State University. Since April of 1988, I have been employed by EPA as a Remedial Project Manager in the Superfund Division of EPA's Region 5 office, which is located in Chicago, Illinois.

2. Since late July 2016, I have worked as one of two Remedial Project Managers ("RPMs") responsible for directing and overseeing certain cleanup activities at the U.S. Smelter and Lead Refinery, Inc. Site ("USS Lead Site" or "Site") in East Chicago, Indiana.

3. In my capacity as an RPM at the Site, I have directed and overseen soil sampling; excavation of contaminated soils; transportation off-site of contaminated soils; restoration of excavated areas; and other matters pertaining to the response actions at the Site.

4. In addition, as an RPM, I am responsible for creating and maintaining records for EPA, which are the basis for decision-making within the Agency. I have direct knowledge of the general practices within the Superfund Division, Region 5, for maintaining records that document the sampling and analysis of soils at Superfund sites as well as securing access beforehand to conduct the soil sampling. I also have direct knowledge of the records management practices in connection with access to properties and soil sampling and analysis at the USS Lead Site.

5. I have reviewed the allegations made by the individuals who have applied to intervene: Ron Adams; Sara and Mauro Jimenez; and Carmen Garza and her daughters Gabriela Garza and Andrea Jurado.

6. I have also reviewed records and documents maintained by EPA that pertain to the allegations made by these individuals, have personal knowledge with respect to certain of the allegations, and have talked with co-workers and representatives of SulTRAC JV (an EPA contractor) who were and are responsible for: (1) maintaining records regarding access to properties in Zones 1, 2 and 3; (2) collecting and analyzing soil samples from these Zones; and (3) creating records to document the sampling activities and analytical results.

7. On the basis of my experience as an RPM, my review of Site records and summaries, and my conversations, I have formed the following beliefs: (A) EPA has maintained careful records of the locations of all sampling performed at the Site; (B) where there is no record of EPA having secured access to a particular property during a particular timeframe, it is more likely than not that EPA did not lose this record but rather that no record exists because EPA never secured access to

a particular property during a particular timeframe; and (C) where there is no record that EPA collected or analyzed a soil sample from a particular property during a particular timeframe, it is more likely than not that EPA did not lose this record but rather that no record exists because EPA never collected or analyzed a soil sample from a particular property during a particular timeframe.

8. With respect to the property owned by Ron Adams and commonly known as 4735 McCook Avenue, EPA:

a. Secured access in 2006 from the previous owner to perform soil sampling;

b. Has no record of having sampled the property at any time prior to 2016;

c. Secured access on August 3, 2016, to collect soil samples associated with remedial design ("RD") work;

d. Collected soils on September 21, 2016;

e. Notified Mr. Adams of the RD soil sampling results on November 9, 2016; and

f. Expects to excavate soils with concentrations of lead or arsenic above remedial action levels, backfill the excavated areas, and restore the excavated areas as necessary, including resodding, at a time consistent with its prioritization among the currently-known 390 other properties in Zone 2 that, as of this date, still need to be remediated.

9. With respect to the property owned by Ron Adams and commonly known as 5019 Alexander Avenue, EPA:

a. Has no record of having secured access to perform sampling prior to 2016;

b. Has no record of having sampled the property at any time prior to 2016;

c. Secured access on August 3, 2016, to collect RD soil samples;

d. Collected soils on August 10, 2016;

e. Communicated the final soil sampling results to Mr. Adams by letter dated September 23, 2016; and

f. Because this property had high levels of contamination in the top six inches of the soil, removed in November 2016 all soils with concentrations of lead or arsenic above remedial action levels, backfilled excavated areas, and in early December 2016 restored the excavated areas, including resodding.

10. With respect to the property owned by Sara and Mauro Jimenez and commonly known as 4917 Euclid Avenue, EPA:

a. Has no record of having secured access to perform sampling prior to November 2014;

b. Has no record of having performed sampling prior to June 2015;

c. Believes that if Mr. and Mrs. Jimenez were contacted for soil sampling prior to November 2014, the sampling would have been for purposes of EPA's Remedial Investigation ("RI"); because, however, EPA ultimately determined that it needed fewer soil samples for the RI than it originally projected, the Jimenez' property might have been among those that EPA did not ultimately sample;

d. Believes that if Mr. and Mrs. Jimenez were contacted for soil sampling prior to November 2014, EPA did not thereafter sample the property because EPA has no record of any such sampling;

e. Secured access on November 10, 2014, to collect RD soil samples;

f. Collected soils on June 11, 2015;

g. Finalized these soil sampling results (as explained in greater detail below in Paragraphs 14–31) in September 2016;

h. Communicated the final sampling results to Mr. and Mrs. Jimenez in a letter dated September 14, 2016;

i. Intends in 2017 to excavate all soils with concentrations of lead or arsenic above remedial action levels in both the front and back yards, and to backfill and restore excavated areas as necessary, including resodding;

j. Sampled the dust in the interior of Mr. and Mrs. Jimenez' home on September 15, 2016; and

k. Communicated to Mr. and Mrs. Jimenez by letter dated October 7, 2016, that the concentrations of lead and arsenic in their home's interior were below EPA health screening levels.

11. The soil sampling results contained in the September 14, 2016 letter to Mr. and Mrs. Jimenez did not disclose "the results of the soil testing that had been performed *five years* earlier," Applicants' Brief at 20, but rather disclosed results of sampling that had occurred on June 11, 2015. For reasons explained in greater detail below in Paragraphs 14– 31, the results of this 2015 sampling event were not finalized until September 2016.

12. With respect to the property owned by Carmen Garza and commonly known as 4927 Euclid Avenue, EPA:

a. EPA has no record of having secured access to perform sampling prior to November 2014;

b. Has no record of having performed sampling prior to June 2015;

c. Believes that if Ms. Garza was contacted for soil sampling prior to November 2014, the sampling would have been for purposes of EPA's RI; because, however, EPA ultimately determined that it needed fewer soil samples for the RI than it originally

projected, Ms. Garza's property might have been among those that EPA did not ultimately sample;

d. Believes that if Ms. Garza was contacted for soil sampling prior to November 2014, EPA did not thereafter sample the property because EPA has no record of any such sampling;

e. Secured access on November 10, 2014, to collect RD soil samples;

f. Collected soils on June 11, 2015;

g. Finalized these soil sampling results (as explained in greater detail below in Paragraphs 14–31) in September 2016;

h. Communicated the final RD sampling results to Ms. Garza in a letter dated September 14, 2016;

i. Removed in November 2016 all soils from Ms. Garza's property with concentrations of lead or arsenic above remedial action levels, backfilled excavated areas and in early December 2016 restored the excavated areas, including resodding.

j. Sampled the dust in the interior of Ms. Garza's home in October 12, 2016;

k. Communicated by telephone on November 9, 2016, that the concentration of lead in the interior of Ms. Garza's home exceeded the EPA health screening level; and

l. Expects to clean the interior of Ms. Garza's home in the first quarter of 2017.

13. The sampling results contained in the September 14, 2016, letter to Ms. Garza did not disclose "the results of the soil testing that had been performed *six years* earlier," Applicants' Brief at 21, but rather disclosed results of sampling that had occurred on June 11, 2015. For reasons explained in Paragraphs 14–31 below, the validated and "corrected" results of these 2015 sampling event were not finalized until September 2016.

14. In connection with the 2014–2015 RD sampling in Zones 1 and 3, EPA collected approximately 3,100 soil samples from residents' yards. To speak colloquially, but in a manner more easily understood, EPA collected approximately 3,100 "bags of dirt" from residents' yards. EPA analyzed all of those 3,100 bags of dirt with a screening technology known as XRF. XRF screening technology uses spectrometry to determine concentrations in the sample (in this case, concentrations of lead and arsenic). With XRF technology, EPA "shoots" a bag of dirt three times with a calibrated XRF device and receives an immediate reading of the concentrations.

15. From the approximately 3,100 bags of dirt that EPA collected, EPA got approximately 3,400 XRF screening results. The difference in those numbers is because approximately 300 bags of dirt were screened twice for Quality Control/Quality Assurance purposes. The duplicate is itself considered a separate result.

16. XRF screening has its advantages: it provides an instantaneous read-out of the concentration levels and it is less costly than laboratory analysis. Its disadvantage is that it is less accurate than laboratory results.

17. Therefore, in order to improve the accuracy of the XRF screening concentrations, EPA sends a subset of all of its bags of dirt (for these purposes, it probably is better to use the term "samples" for what EPA sends to a laboratory) to a laboratory for analysis so that EPA can develop a correlation equation that "corrects" the XRF screenings. The accuracy of the correlation equation for XRF screenings is contingent upon the size of the laboratory results data set: the larger the number of laboratory results, the more accurate the correction equation.

18. In this case, from the approximately 3,100 bags of dirt that EPA collected, EPA sent approximately 930 samples to a laboratory for lead and arsenic analysis. (Of those approximately 930, approximately 80 were duplicate samples for QA/QC purposes.)

19. Therefore, from its 2014–2015 RD sampling events, EPA had approximately 4,330 independent soil sample results (3,400 XRF results and 930 lab results). Each "result" had a lead concentration and an arsenic concentration. Therefore, rounding up, EPA had approximately 8700 data points of lead and arsenic soil concentration information.

20. In addition, in this case, EPA "split" some of the bags of dirt with the Defendants to the Consent Decree (who are paying for the Zones 1 and 3 cleanup and were and are responsible for transporting and disposing of the contaminated soils). It is a common practice for EPA to split samples with responsible parties. The Defendants sent between 1,100 to 1,200 samples to a laboratory different from EPA's laboratory for analysis of lead and arsenic. The Defendants did not do any XRF screenings.

21. In terms of timing, EPA generally completed XRF screenings in no more than one week after collection. However, these "raw" screening results were not accurate until a correlation equation was applied to them.

22. With respect to laboratory analyses, EPA generally sent its samples to a laboratory within one to two weeks of collection. Complete laboratory validation (which includes third party validation) took approximately 3 to 8 more weeks.

23. Validation is a critical step in laboratory analysis. Laboratory practices and data must be reviewed and validated by a project chemist as well as an independent third party to make sure that the laboratory has met the project-specific analytical limits set forth in what is called the Quality Assurance Project Plan for the site.

24. Once laboratory results have been validated by a third party, they can be considered final. However, XRF screenings cannot be considered final until they are correlated to lab results and corrected by a correlation equation. In this case, EPA wanted the benefit of a large number of

validated laboratory results in order to establish an accurate correlation equation. Therefore, EPA elected to wait until it had in hand the validated laboratory results from all of the RD sampling it performed in 2014–2015 before developing the correlation equation.

25. In June 2015, EPA collected 16 bags of dirt from the Garza and Jimenez properties (8 from each). EPA XRF-screened all 16 bags of dirt within a short time of sample collection, but these results were not accurate. They still needed to be "corrected" by a correlation equation. In addition, EPA sent 2 of the Garza samples to a laboratory analysis on June 18, 2015. These results were fully validated on July 7, 2015.

26. After EPA collected the last of its bags of dirt in December 2015, EPA screened these last bags with the XRF device in short order and sent a subset of them to its laboratory for analysis. EPA received its last third party-validated laboratory results at the end of January 2016.

27. In late January and early February of this year, EPA began to develop a correlation equation for its raw XRF screenings based upon EPA's fully-validated laboratory data set. EPA began to discuss with the Defendants the results of EPA's efforts to develop an XRF correction equation. The Defendants then requested that their laboratory results should also be used to develop the XRF correlation equation.

28. EPA and the Defendants then identified three possible XRF correlation equations: one based solely on EPA laboratory data; one based solely on laboratory data developed by the Defendants; and one based on laboratory data that was a combination of EPA's laboratory data and the Defendants' laboratory data. In order to determine which of these data sets to use, EPA required the Defendants to provide EPA with fully-validated laboratory data for the split samples the Defendants has taken.

29. The Defendants provided EPA with fully-validated laboratory data at the end of March 2016. After further discussion, the parties finalized the correlation equation on or about April 21, 2016, electing to use as the appropriate correlation equation an equation based solely on EPA's laboratory data.

30. Shortly thereafter, EPA applied this correlation equation to the original XRF results to obtain its 2016 final "corrected" XRF results for Zone 1 and 3 samples.

31. In August, EPA determined that a number of XRF results for arsenic in Zone 3 were not accurate enough to form the basis for Remedial Design. EPA remedied this in two ways. First, for selected properties that fell within certain criteria, EPA collected additional soil samples and had those samples analyzed by a laboratory. EPA then used the validated laboratory results as the final concentrations for those properties. Second, EPA performed additional statistical analyses of all of the Zone 3 XRF data. On the basis of that statistical analysis, EPA decided to no longer use arsenic or lead correlation equations for XRF results. Instead, the Agency decided to use, for both arsenic and lead, the maximum (instead of the average) value of the three measurements taken by the XRF device. For arsenic, this change alone gave EPA a 95% confidence that any sample screened by XRF did not yield a false negative for remediation-eligible levels of contamination. For lead, the EPA also lowered the concentration value triggering remediation to 325 ppm which gave EPA a 93% confidence that any sample screened by XRF did not yield a false negative for remediation-eligible levels of contamination. (This lower value was for samples that had XRF results only; the trigger level for samples analyzed by a laboratory remained at 400 ppm). With these changes to the methods of evaluating arsenic and lead XRF screenings, the risk of failing to clean up a remediation-eligible property approaches zero percent.

32. EPA made these decisions in September and the letters for the Zone 3 residents, including for the Garza and Jimenez families, were issued immediately after those decisions.

33. Before doing any work in Zone 1, EPA will reevaluate the Zone 1 XRF data to ensure a fully protective remedy.

34. While time consuming, EPA's approach to soil sampling collection and analysis (that is, the use of both laboratory analysis and XRF screening), its splitting of samples with the paying responsible parties, and its development of an XRF "correlation equation" only after a large set of laboratory data is validated is an approach commonly employed by EPA for residential lead clean-ups. In the context of thousands of samples such as those at issue here, it is cost-effective, allowing EPA to use a mix of more expensive laboratory data and less expensive XRF data to prepare remedial design documents.

35. At no time did EPA withhold data from the Applicants or anyone else about sampling results; as data was finalized, it was provided.

Pursuant to 28 U.S.C. § 1746, I declare under penalty of perjury that the foregoing is true and correct.

s/Thomas Alcamo December 16, 2016
Thomas Alcamo